

DE 2,547,588 A1

Job No.: 1505-94408

Ref.: DE 2547588

Translated from German by the Ralph McElroy Translation Company
910 West Avenue, Austin, Texas 78701 USA

3. Laundry transport bag in accordance with Claim 1, characterized by the feature that the considerably narrower web of fabric (B') has an approximately trapezoidal shaped configuration.

4. Laundry transport bag in accordance with Claim 1, characterized by the feature that the considerably smaller web of fabric (B'') has an approximately triangular configuration.

5. Laundry transport bag in accordance with Claim 1, characterized by the feature that the considerably smaller web of fabric (B,B',B'') is sewn onto the first rectangular web of fabric (A).

6. Laundry transport bag in accordance with Claim 5, characterized by the feature that the considerably narrower web of fabric (B,B',B'') comprises a different color and/or a different material compared to the rectangular web of fabric (A).

7. Laundry transport bag in accordance with Claim 1 or several of the preceding claims, characterized by the feature that the considerably narrower web of fabric (B,B',B'') is provided with a cord (10) at the end thereof that is located remotely from the rectangular web of fabric (A).

8. Process for the manufacture of a laundry transport bag in accordance with Claim 2, characterized by the feature that the laundry bags, which comprise the two parts (A,B), are cut out of a continuous web of fabric (11) in one piece and without waste and in such a way that each cut edge of each bag simultaneously forms the cut edge of the neighboring bag.

9. Laundry transport bag in accordance with Claim 1, characterized by the feature that one or two short seams (12,13) are made on the upper edge (3) in order to join together the mutually overlapping edges (2,4) of the first web of fabric (A).

The invention pertains to a laundry transport bag for self-emptying in a drum-type washing machine, especially for hospital laundry, whereby the bag comprises at least one essentially rectangular web of fabric.

Such a laundry transport bag is already known, especially for laundry from a clinic and infectious laundry, whereby such a bag, like numerous other transport bags of this nature, exhibits the advantage that it empties itself in a drum-type washing machine. This is achieved in a way that is similar to that in the case of cone-shaped transport bags by way of the feature that the laundry gradually works its way out of appropriate openings during the rotation of the wash drum. In order to do this, the cutting pattern for the bag is always rectangular prior to manufacture, and it is subdivided into three approximately equally large areas of which two are joined together by a long transverse seam, and all three are joined together by a short longitudinal seam. Thus a general disadvantage, which is associated with this design in the first place and which is also associated with all the other known laundry transport bags, comprises the feature that considerable sewing work is required in order to produce the bag. An additional disadvantage comprises the feature that the laundry is able to work itself out only very gradually, namely along the aforementioned long transverse seam in this case. As a result of this, naturally,

only partial opening of the bag takes place, and the laundry works its way out correspondingly slowly (DT-GM 1 939 621).

This disadvantage is also exhibited by the aforementioned cone-shaped laundry transport bag because here, likewise, the laundry is able to work itself out only gradually during the rotation of the wash drum. Special openings are not provided in this regard but, rather, the bag widens out very markedly toward the opening so that the laundry works its way out as a result of this alone. As a result, however, the disadvantage arises that the bag operates problem-free only when, like the washing machine, it is not filled excessively, though this cannot be adhered to very often in practice.

Moreover, another laundry transport bag of this nature is known that comprises a web of trapezoidal material with overlapping ends. As a consequence of its trapezoidal configuration, and hence that of the finished bag as well, suspending these bags in known collection trollies is associated with difficulties because the widened out edge of the bag must first be positioned in folds and overlapped. If, in this way, gathering up materializes too loosely, then the bag can inadvertently slip out of the framework. In addition, such a conical bag is naturally less capable of being accommodated than a bag of the usual form of construction which is approximately cylindrical in shape (DT-PS 1 205 444).

Finally, laundry transport bags with a longitudinal slot are also known, whereby these bags likewise have a closed end at the bottom. In this case, the bag comprises two bag components that are inserted into one another, wherein these components are joined together at their lower ends, and wherein each bag component is provided with a longitudinal slot, and wherein one longitudinal slot runs along the longitudinal edge of one bag component, and the other longitudinal slot runs along the second bag component's longitudinal edge that is located on the opposite side. The advantage of more rapid emptying out through the slot does indeed arise as a result, but the disadvantage that is associated with this design is that the soiled laundry can easily fall out of the slot during transportation (DT-AS 1 585 726).

The problem that forms the basis of the invention is to alleviate the aforementioned disadvantages and to improve the laundry transport bag, which was mentioned at the beginning, in such a way that rapid and easy production is achieved by markedly reducing the number and length of the seams.

As a result of the invention, the solution to this problem comprises the feature that an additional and considerably narrower web of fabric, with approximately the same lateral length as that of a first web of fabric, connects approximately in the middle of a lateral edge of the rectangular [first] web of fabric, and by the feature that the two opposite lateral edges of the first web of fabric are positioned in an overlapping manner to give a tube-shaped structure, and the considerably narrower web of fabric is positioned over the slot that is formed in this way.

As a result, the subject of the invention can be produced without any connecting seams. The rectangular web of fabric and the considerably narrower web of fabric can in fact comprise one single piece of material, whereby the aforementioned considerably narrower web of fabric forms, among other things, the base of the bag in the usage condition, without any connecting seam have to be made for this purpose. As usual, the bag is hereby tied together at the top or suspended in the aforementioned collection trolley. The slotted lateral wall of the tube-shaped structure is hereby covered not only as a consequence of the aforementioned overlapping, but it is also covered by the aforementioned second narrow web of fabric, as a result of which the slot is doubly secured to stop the laundry from falling out. In addition, however, the possibility also presents itself of joining the overlapped ends by means of a short seam in the region of overlapping alone, so that the bag always terminates in a ring form at its open end. In this way, the bag in accordance with the invention has only this short connecting seam.

In a further embodiment of the invention, the feature is provided that the breadth of the considerably narrower web of fabric measures approximately one third of the breadth of the large web of fabric. The rectangular shape of this considerably narrower web of fabric is also maintained in this case.

However, it is especially advantageous if the considerably narrower web of fabric has an approximately trapezoidal configuration. This has the advantage that the surface area of the second smaller web of fabric is considerably smaller still. However, it [this surface area] is virtually minimal if, in accordance with a further feature of the invention, the considerably smaller web of fabric is provided with an approximately triangular configuration.

If the web of fabric, from which the object of the invention is to be produced, does not have the required breadth, then the considerably smaller web of fabric can be sewn onto the first rectangular web of fabric. In this case, it can be expedient if the considerably narrower web of fabric always comprises a different color and/or a different material compared to the rectangular web of fabric. This single seam is then always considerably shorter than the numerous connecting seams of the known transport bags that have been mentioned.

In this regard, it can also be preferable if the considerably narrower web of fabric is provided with a cord at the end thereof that is located remotely from the rectangular web of fabric. This cord then serves in a known way for tying the bag.

Additional advantages and details of the invention will emerge from the description, which now follows, of some embodiment examples with reference being made to the drawing. The following aspects are shown therein.

Figure 1 shows a cutting pattern for a first form of embodiment;

Figure 2 shows a perspective view of the assembled transport bag in accordance with Figure 1;

Figure 3 shows a cutting pattern for an additional form of embodiment;

Figure 4 shows a perspective view of the assembled transport bag in accordance with Figure 3; and

Figure 5 shows a continuous web of fabric with cutting patterns in accordance with Figure 1.

The cutting pattern in accordance with Figure 1 can be thought of as being assembled from two rectangular webs of fabric A and B although these two parts are formed in one piece. The upper rectangular web of fabric A has lateral edges 1, 2, 3, and 4, wherein edge 1 can be thought of as continuing via line 9, with its dots and dashes, as far as the point of intersection 8. It has a breadth b. A considerably narrower rectangular web of fabric of breadth a follows on from here at the bottom, namely approximately in the middle of web A. The measurement a in this preferred form of embodiment amounts to approximately one third of the measurement b. The length of the upper web A is designated d, and is preferably approximately equal to the length c of the lower considerably narrower web B with the lateral edges 5, 6, and 7. In a further form of embodiment, the fourth lateral edge 9 can also be sewn onto the aforementioned lower lateral edge 1 of the upper web A. In this case, the web of material B can be different in color and/or it can comprise a different material.

Two short seams 12 and 13 are also indicated at the upper edge of web A; however, these seams are installed only in the folded state in accordance with Figure 2, and they are not an essential requirement as is the case with seam 9 as well.

The laundry transport bag in accordance with Figure 2 is produced from the cutting pattern in accordance with Figure 1 by positioning the two edges 2 and 4 over one another in an overlapping manner, after which the web of fabric B is positioned over them from the bottom to the top in Figure 1. The tube-shaped structure in accordance with Figure 2 is produced as a result. Here also, the aforementioned short seams 12 and 13 can be positioned on the upper edge 3; the seam can also run in the longitudinal direction of the edge 3, of course; as a result of this, only one seam arises. As a result, the filling end of the bag always terminates in an annular shape. However, this step is not absolutely essential, especially when the laundry transport bag is suspended in a known collection trolley, in the case of which the upper edge is clamped firmly to the framework and is held open in this way. In any case, the situation is thus ensured - even without the seams 12 and 13 - that the longitudinal edges 2 and 4 are covered by the narrower web of fabric B as can be seen clearly in Figure 2.

In absolutely no case, consequently, can the soiled laundry slip out between the edges 2 and 4.

In the case of the form of embodiment in accordance with Figure 3, the lower web of fabric B' has the configuration of a trapezoid with parallel lateral edges 9' and 14, and two other

edges 15 and 16 that are opposite one another. Naturally, material savings can be achieved as a result of this.

In the case of an additional form of embodiment, which is not illustrated, the cut edge 14, which is parallel to the cut edge 3, can shrink down to a point as a result of which a triangle is produced that requires still less material.

A cord 10 can also be attached to the apex of this triangle or to the cut edge 14, whereby the bag in accordance with Figure 4 can subsequently be tied by means of this cord.

In other regards, this form of embodiment in accordance with Figures 3 and 4 is the same as that in accordance with Figures 1 and 2.

Thus the perspective view in accordance with Figure 4 corresponds to that of Figure 2. It is seen here that the cord 10 can be used for tying the upper edge 3 of the tube-shaped bag.

Figure 5 shows a web of material 11, which can be continuous in the direction of the arrow 17 or in the counter-direction, i.e. it can continue arbitrarily in this direction. As is seen, cutting patterns in accordance with Figure 1 are marked on the web 17 [sic; 11] in one single piece in such a way that absolutely no waste material is produced. An additional advantage comprises the feature that only half as many cuts have to be made as would otherwise be the case. A comparison with Figure 1 shows that, in the upper region, e.g. the cut edge 2 simultaneously forms the cut edge 5 of the neighboring cutting pattern. Thus very efficient production of the transport bag is possible in this way with dimensions in accordance with Figure 1.

Since the seam 9 in accordance with Figure 1 is also eliminated in this case, sewing operations are restricted to a minimum.

On the other hand, it can be extraordinarily useful if the two aforementioned short seams 12 or 13, or only one of them, is installed in the aforementioned manner on the upper edge 3, because the bag can consequently be suspended with ease, and always in the correct size, over transoms. These seams can be extraordinarily short so that the cost thereof is insignificant in the production of the bag.

Fig. 1

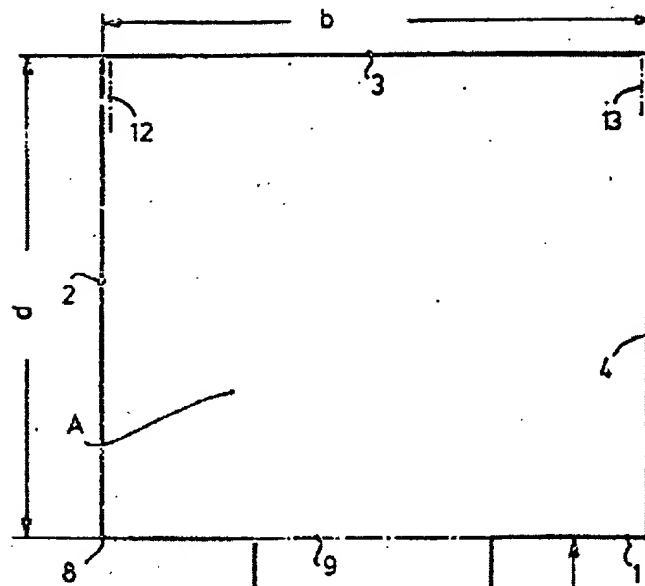
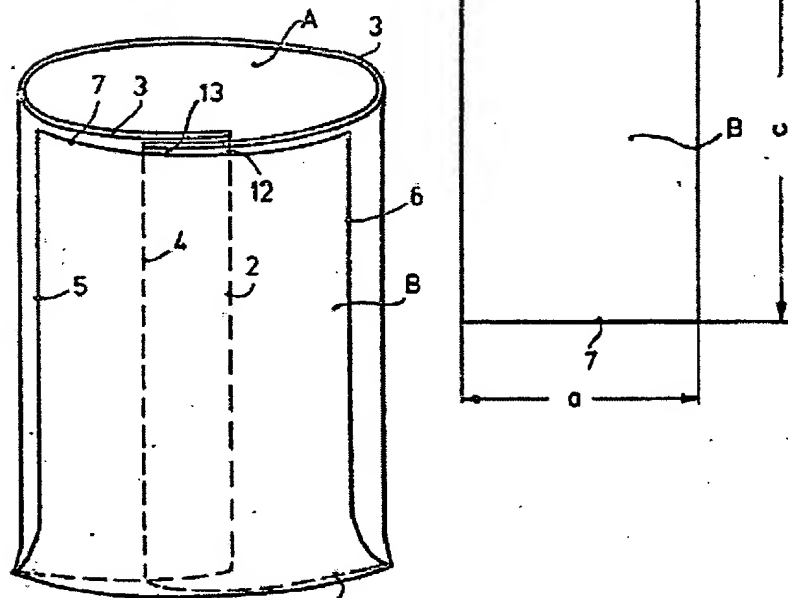


Fig. 2



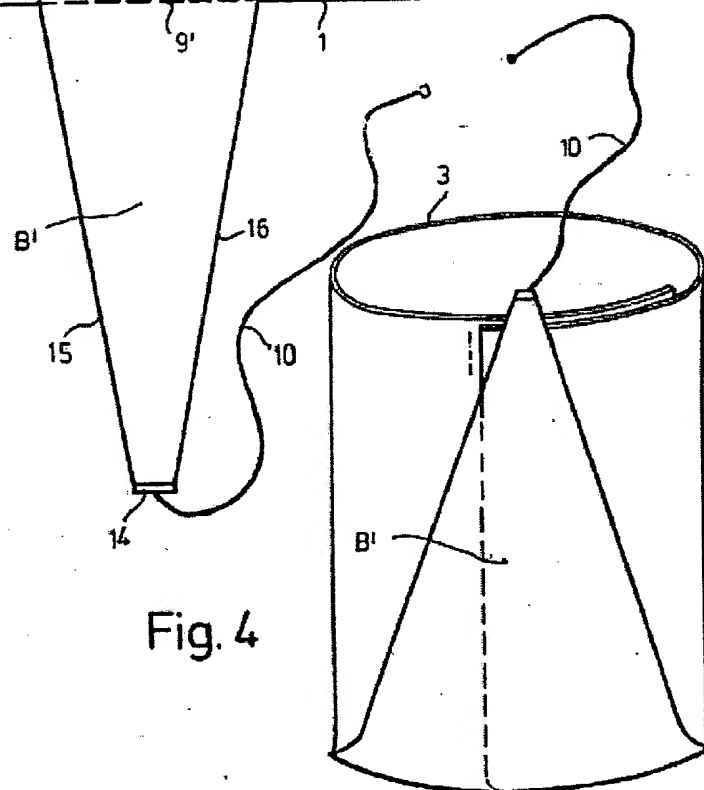
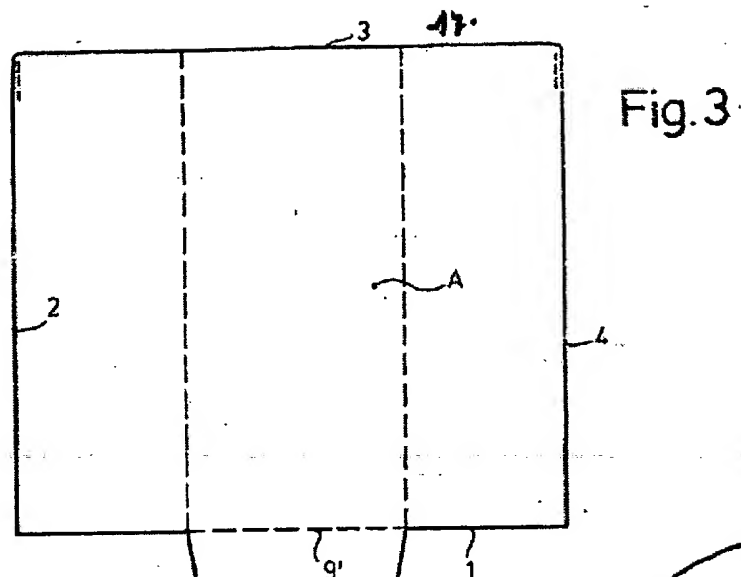
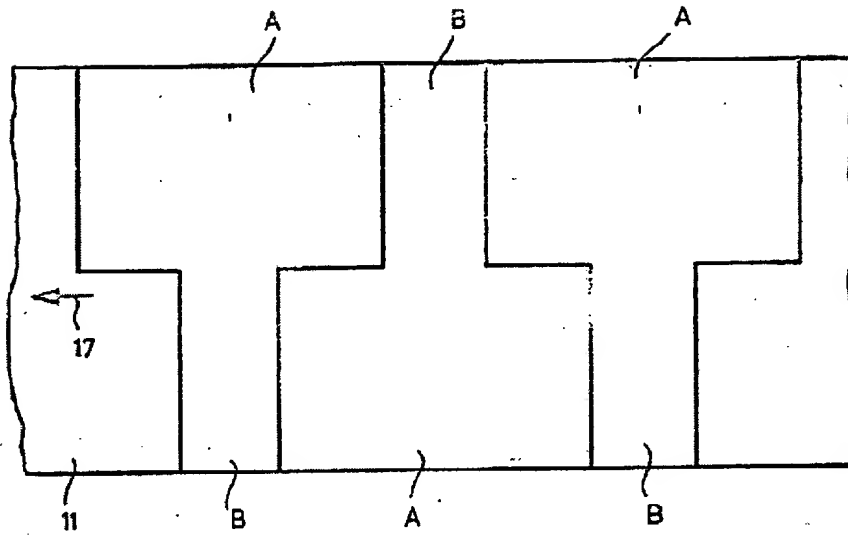


Fig. 5



This Page Blank (uspto)